



MODIS C7 Reprocessing Plan

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Outline

- **C61 – Processing history**
- **C7 and Beyond – Time line**
- **C7 – L1, Atmosphere and Land**



C61 – Processing history

- **L1B reprocessing (3 – 6 months)**
 - Terra 06/2017 – 08/2017
 - Aqua 12/2017 – 03/2018
- **Atmosphere (6+ months)**
 - Terra 07/2017 – 12/2017
 - Aqua 01/2018 – 03/2018
- **Land (~ 24 months)**
 - Terra and Aqua (Tier1): 02/2020 – 12/2021
 - Terra and Aqua (Tier2): 2021 – in progress
 - MAIAC – to complete by May/June 2023
 - C62 DSR/PAR reprocessing for the full mission period (2000 – 2023) to start in May 2023, expected to complete by Dec 2023.



C61 – Processing history

- **Land**

- May be 18 months or less

- Issues

- Re-reprocessing of products/temporal periods needed to address production related and science algorithm issues revealed while reprocessing is in progress.
- Production system shutdown for periodic maintenance and system upgrades
- Production system problems, production database performance, export backlog
- Some of these needed to be transitioned to Ubuntu OS prior to start of reprocessing



C7 and Beyond

- **C7 target start (Best Scenario)**
 - L1B: early 2024
 - Atmosphere: Spring or Summer 2024
 - Land: Fall 2024
- **End of Mission processing (Phase F)**
 - Depends on Senior Review outcome
 - Funding Scenarios for science team
 - Mission decommission timeline
 - C7.1 (only calibration change)/C8 (calibration + discipline science) reprocessing
 - Start in early 2026



C7: L1

- All calibration changes and LUT are in place – many of these changes are already in C61 forward processing
- Science Test in progress for atmosphere, test for land team expected to start in June.
- Target start date for L1 collection reprocessing is early 2024
- Schedule drivers
 - How much of downstream tests required (land and atmosphere)
 - Still to come
 - Required – geolocation change, land water mask
 - Optional – any post process that usually run with L1 (e.g. subset to Langley RC)
- Impact from Orbital drift is expected to be minimal or none, calibrated products are expected to be nominal



C7: Atmosphere

- Algorithm change development in progress at SCF
- Integration Test in progress at MODAPS for some of the PGEs.
- Target start date – Summer 2024
- Schedule drivers
 - Need for availability of C7 L1
 - Number of algorithm changes and complexity
 - Deviation from the current algorithm structure and use of new libraries
 - Delivery schedule
 - Product interdependency
 - Level of testing required at MODAPS



C7: Land

- In planning stage
- Product specific changes not determined yet
- Needs Polarization Correction based on the C7 L1B
- Product specific science changes – need to weigh in effort/complexity vs change in product performance
- MODIS C7 to VIIRS C3